

PROJECT ADMINISTRATION DATA SHEET

ORIGINAL



REVISION NO. \_\_\_\_\_

Project No. A-3101DATE 11/13/81Project Director: J. S. Ussailis~~SSR/~~Lab RAIL/MADSponsor: Naval Research Laboratory, Washington, DCType Agreement: Contract N00014-82-C-2024Award Period: From 10/30/81 To 12/30/81 (Performance) 2/28/82 (Reports)Sponsor Amount: \$9,971 Contracted through:Cost Sharing: None GTRI/OTTitle: Radar Services for Operational Evaluation (OPEVAL)ADMINISTRATIVE DATAOCA Contact William F. Brown x4820

## 1) Sponsor Technical Contact:

X R. Mitchell, Code 5720Naval Research Laboratory4555 Overlook Ave.Washington, DC 20375(202) 767-2712

## 2) Sponsor Admin/Contractual Matters:

T. A. BryantONR RRGeorgia Institute of Technology206 O'keefe Bldg.Atlanta, GA 30332Defense Priority Rating: DO-A7Security Classification: UnclassifiedRESTRICTIONSSee Attached Gov't Supplemental Information Sheet for Additional Requirements.

Travel: Foreign travel must have prior approval — Contact OCA in each case. Domestic travel requires sponsor approval where total will exceed greater of \$500 or 125% of approved proposal budget category.

Equipment: Title vests with none proposedCOMMENTS:COPIES TO:Administrative Coordinator  
Research Property Management  
Accounting  
Procurement/EES Supply ServicesResearch Security Services  
~~Reports Coordinator (OCA)~~  
Legal Services (OCA)  
LibraryEES Public Relations (2)  
Computer Input  
Project File  
Other \_\_\_\_\_

SPONSORED PROJECT TERMINATION SHEETDate 3/4/82

Project Title: Radar Services for Operational Evaluation (OPEVAL)

Project No: A-3101

Project Director: J. S. Ussailis

Sponsor: Naval Research Laboratory

Effective Termination Date: 2/28/82Clearance of Accounting Charges: 2/28/82

Grant/Contract Closeout Actions Remaining:

- ☒ Final Invoice and Closing Documents
- ☐ Final Fiscal Report
- ☒ Final Report of Inventions
- ☒ Govt. Property Inventory & Related Certificate
- ☐ Classified Material Certificate
- ☐ Other \_\_\_\_\_

Assigned to: RAIL/MAD (School/Laboratory)COPIES TO:

RAIL  
Administrative Coordinator  
Research Property Management  
Accounting  
Procurement/EES Supply Services

Research Security Services  
Reports Coordinator (OCA)  
Legal Services (OCA)  
Library

EES Public Relations (2)  
Computer Input  
Project File  
Other \_\_\_\_\_



# Georgia Institute of Technology

ENGINEERING EXPERIMENT STATION

ATLANTA, GEORGIA 30332

22 February 1982

Naval Research Laboratory  
4555 Overlook Avenue  
Washington, D.C. 20375

Attention: Mr. Reginald Mitchell  
Code 5720

Reference: Contract No. N00014-82-C-2024,  
Georgia Tech Project No. A-3101,  
CDRL sequence number A002-Final Report

Gentlemen:

An attachment to this letter summarizes the activities, results, and work accomplished under the reference contract.

Respectfully submitted,

✓James S. Ussailis  
Project Director  
(404) 424-9613

JSU/ms

Approved by:

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Harold Bassett, chief  
Modeling and Analysis Division

Final Report  
Period 30 October 1981 through 30 December 1981

RADAR SERVICES FOR OPERATIONAL EVALUATION (OPEVAL)

Prepared for

Naval Research Laboratory  
Code 5720  
4555 Overlook Avenue  
Washington, D.C. 20375

Contract No. N00014-82-C-2024

Prepared by

GEORGIA INSTITUTE OF TECHNOLOGY  
Engineering Experiment Station  
Radar and Instrumentation Laboratory  
Atlanta, Georgia 30332

February 1982

## 1.0 Introduction

Five tasks were required by the statement of work to support an operational evaluation (OPEVAL) test conducted by the Naval Research Laboratory (NRL); the work accomplished under each task is summarized below.

### 1.1 Task 1

Two ASQ-42 Ku-band radar transmitters were repaired and their operational characteristics were confirmed during the first week of November 1981. At this time an improved cooling system was installed in the radar transmitter control unit to prevent power supply overheating as occurred on previous OPEVAL. A microwave package capable of frequency, power, pulse repetition interval (PRI), and pulse width measurement was constructed. After the losses and operational characteristics of this package were confirmed, it was separated into two sections for shipment and ease of reassembly.

### 1.2 Task 2

On 10 November 1981, the equipments were packed and shipped to Bradley Field north of Hartford, Connecticut via air freight. Georgia Tech personnel then transported the equipment to Fisher's Island, New York on 12 November. During unpacking, at the site one of the radar transmitters was found inoperable due to shipment damage; the operating backup unit was then employed for the remainder of the OPEVAL.

### 1.3 Task 3

The radar transmitter with the companion microwave measurement package was assembled in an area provided by NRL. Frequency was adjusted according to the test plan, PRI and pulse width were verified to be in accordance with the test plan, and the peak power output at the transmitter was confirmed to be greater than 35 KW. On 13 November, Georgia Tech personnel

assisted the project sponsor in determining that a reasonable waveguide loss existed between the transmitter and the antenna.

#### 1.4 Task 4

Operation began at 0200 Monday, 16 November, in accordance with the test plan; the radar operated flawlessly throughout the evaluation.

#### 1.5 Task 5

All Georgia Tech equipment was repackaged and shipped to Atlanta, Georgia on the following day. During the next week, the damaged unit was cannibalized to repair a unit that ceased functioning during the July OPEVAL in Fort Lauderdale, Florida. The other unit was checked, cleaned and returned to storage.